STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION
2101 WEBSTER STREET, SUITE 500
OAKLAND, CA 94612

PETE
TEL: (510) 286-1255
FAX: (510) 286-1380

May 20, 1993
File No. 1114.17(SIM)

Philip J. Armstrong, Project Officer
U.S. Environmental Protection Agency, Region IX
Hazardous Waste Division (H-8-1)
75 Hawthorne Street
San Francisco, CA 94105

Dear Mr. Armstrong:

Subject: Quarterly Progress Report for the South Bay MSCA Fiscal Year 93 for the Quarter 1 January - 31 March 1993

Attached are two copies of the Quarterly Progress Report. The report covers the tasks in the approved Workplan amendments within the grant amendment award of June 5, 1992.

While the current Workplan amends and carries the work through September 1993, the June 1992 funding award is only through September 1992 as discussed at our January 21 meeting. An additional grant award was expected early in the federal fiscal year (approximately second quarter FFY 93) to complete the workplan. By letter of February 9, I transmitted to you a copy of the proposed changes for the remaining grant award for FFY 93. A subsequent meeting with you and Cheryl Filart indicated that request was unsatisfactory considering changes in the reduced indirect cost rate and the requirement for a detailed travel budget by site. Additionally, the revised work plan budgets would have to be processed through the State Board as an amendment with a revised application. On May 3 I resubmitted a revised budget through the State Board for your reconsideration in awarding the remainder of the agreement for FFY 93.

As before, I would appreciate any constructive comments you may have to assure compliance of and/or improve the usefulness of the report. Please call me (510/286-0304) if you have any questions.

Sincerely,

Steve Morse
MSCA Program Manager

Attachment: Quarterly Progress Report (2)
cc: SRR, LPK, LKB, BHW, SAH, GW, JET
J. Tarro [SWRCB/DAS(Budgets)], S. Malos [SWRCB/DCWP (Underground Tanks)]
K. McCarty, EPA (H-6-3)

QUARTERLY STATUS REPORT

January - March 1993

SOUTH BAY MULTI-SITE COOPERATIVE AGREEMENT (MSCA)

EPA GRANT NUMBER V-009403-02-9
(as of June 5, 1992)

State Water Resources Control Board

California Regional Water Quality Control Board
San Francisco Bay Region
South Bay Toxics Cleanup Division

May 15, 1993

The goals of the MSCA for this phase are:

To accelerate cleanup of contaminated groundwater at Superfund sites in the South Bay.

To augment the RWQCB's existing programs to ensure that the EPA's requirements, as defined in the National Contingency Plan (NCP), are met for those NPL sites assigned to the RWQCB as lead agency.

* * *

The South Bay Multi-Site Cooperative Agreement (MSCA), Phase II, was awarded and accepted by the State Water Resources Control Board effective April 13, 1988. This progress report for this phase is submitted to satisfy the Special Conditions. This report covers the January - March 1993 quarter as amended in subsequent grant offers, the latest being awarded June 5, 1992 to extend the agreement to September 30, 1993 with partial awards of June 1992 and spring 1993.

The MSCA Grant provides funding for activities of the state (i.e. State Board and Regional Board) responsible for coordinating and enforcing groundwater cleanup programs at Federal Superfund sites in the South Bay. The estimated expenditures, staff years, and accomplishments are compared to the work plans of January 28, 1988, March 9, 1989, February 13, 1990, January 1991, and January 22, 1992 (with pending revisions and reductions per Regional Board memorandum of May 3, 1993.

CONTENTS

This page intentionally blank.

QUARTERLY PROGRESS REPORT
SOUTH BAY MULTI-SITE COOPERATIVE AGREEMENT
January - March 1993

II - SPECIAL CONDITIONS

Besides the tasks in the MSCA's Workplan, some of the grant's Special Conditions require the State Water Resources Control Board (SWRCB) and the Regional Water Quality Control Board (RWQCB) to perform certain activities. The Revised Special Conditions responded to here are part of the grant offer of June 5, 1992.

An amended Workplan for 1992-1993 for $2.35 million was submitted to and approved by the EPA with a partial award June 5, 1992.

Under the terms of the Special Conditions, the Board requested that EPA redirect funds between several of the sites to cover unanticipated costs not budgeted. EPA has agreed to the redirection and included the redirection in the 1992-1993 grant award. Because the award was later than anticipated, and additional agreed upon work was also needed (and not needed) at some sites, redirection will be needed again. (See Regional Board letter of February 9, 1993, and memorandum of May 3, 1993, on these proposed FFY 93 workplan/budget changes.) The remaining partial award by EPA is expected FFY third quarter for the remainder of the grant through December 1993. This concept was discussed and agreed to in principle between in several meetings this fiscal year.

Due to a change in State accounting to allocate all non-site specific charges monthly (to the appropriate NPL sites in proportion to staff activity), the grant workplan non-site specific tasks (A, B, and E.3.) and their accounting records can be misinterpreted. The important indication of budget and expenditures for this quarterly review is the *total for all sites* which is provided in this report.

EPA continues to finalize the few remaining MSCA sites for initial demands for cost-recovery started in early March 1992. EPA has to date received significant and substantial payments. EPA and RP negotiations over costs continued throughout the quarter.

This page intentionally blank.

III - SUMMARY AND STATUS OF MSCA TASKS AND BUDGETS

This Section provides a summary as well as details where necessary on the quarterly progress and status of the MSCA tasks in the Workplan of January 1992 and as approved via the June 1992 grant award.

To accelerate the cleanup at the South Bay Federal Superfund sites the EPA assigned the responsibility along with the necessary augmented funding to the State and Regional Boards to accomplish oversight and regulation of the South Bay Superfund sites under Federal and State law, regulations and EPA Guidelines.

In all instances the acute toxics threat and risk at the MSCA sites is now either under interim control (awaiting long-term solutions) due to aggressive earlier Board regulation and requirements for initial and interim investigations, removals, and remediation or the Board and EPA have adopted and the Responsible Parties are (or have) constructed and/or implemented the long-term remediation project to control chronic threats. The Regional Board's efforts are now focused primarily on the remaining sites requiring completion of any necessary investigations and development of cleanup alternatives (i.e. the RI/FS process) and a proposed cleanup plan (the RAP) for public review and comment (See Table, page III-5). After public review and comment, the Board will adopt the RAP in a Site Cleanup Order (i.e. CAO) as modified by public comment, staff recommendations and Board guidance. If EPA approves of the Board's actions and selects the same remedy (RAP), they will administratively adopt a Record of Decision (ROD). Close coordination with EPA is maintained during the process; there is no reason to believe that EPA would not choose the same remedy as the Board.

Significant Events and Activities During the Grant Quarter:

South Bay MSCA Superfund Site Cleanup Decisions (RI/FS/RAP): All the South Bay Superfund sites have accomplished significant amounts of work to meet Superfund final cleanup decision requirements. The tasks remaining are necessary to meet State and Federal Superfund (all of which the State requires as well) requirements to determine the best alternative considering protection of public health and the environment as well as the maintenance (i.e. high quality groundwater) and protection of the resource (i.e. water conservation and reclamation).

Board Actions:
January: None
February: None
March: Teledyne/Spectra-Physics--status report

Other MSCA Events/Activities during the Quarter:

Quarterly Enforcement Meeting: Although EPA and the Board met frequently during the quarter, no joint quarterly meeting was held between DHS, EPA, and the Board covering the enforcement status of the South Bay toxics cleanup sites -- both Superfund and non-Superfund. This joint meeting was previously formalized in the updated South Bay Enforcement Agreement. At this time the primary area where the three agencies interface is the Stanford Industrial Park area in Palo Alto, Rhône-Poulenc in East Palo Alto where the DTSC was previously the lead agency, and at United Heckathorn and Liquid Gold sites in Richmond where the Board is a support agency.

South Bay Groundwater Task Force: Due to low attendance and interest, future meetings have been canceled unless a specific topic or site arises that warrants reconstitution of the task force. Contact with the usual participants of the Task Force is maintained through individual site-specific contacts.

Board staffing: During the quarter, the Board's staffing in support of the MSCA was satisfactory. Support of an Information System Technician (IST) is provided on an "as needed" basis from another division within the RWQCB. Because of the absence of the IST for most of last year, the production of the Site Management System (SMS) has been suspended with anticipated restart date to be mid-1993. In concert with an effort to reduce the amount of resources necessary in producing the Site Management System, the transfer of the Information System Technician did not significantly affect Site Management System (the published SMS has not been updated since early 1992). It is expected to resume the SMS through the use of an annual update (mid 1993) and followups via a computer Bulletin Board System (now on-line) in early spring 1993. State budget shortfalls did not affect the MSCA staffing, but may affect purchasing timeliness.

1992-1993 MSCA Workplan: The Regional Board submitted the amended 1992-1993 MSCA Workplan in January 1992; the State Board accepted and applied for the amended grant in March 1992; and the EPA awarded the amended Grant in June 1992. The Workplan is effective through September 30, 1993. Revision to the current workplan (reduced budget) and expiration (increased time to December 31, 1993) have been recommended to EPA via the State Board as of May 3, 1993.

EPA Cost-Recovery: In early March 1992, EPA began the process of cost-recovery for the MSCA sites. The demands are for combined costs of the Board (through June 30, 1991) and EPA (through July 31, 1991). By the end of March, several RPs had already paid, and most of the remaining billed sites have paid either in full or partially. A cost-recovery suit has been filed by EPA against Intel, Kim Camp III, CTS Printex, and ADN. Completion of the initial cost-recovery cycle is expected this spring and the beginning of a new annual cycle is expected to begin late spring. SWRCB is prepared to provide site accounting records when necessary.

Status and Funding of MSCA Tasks:

The overall status of the Grant tasks is satisfactory, especially with the new grant supplemental award received June 5, 1992. Some redirection of grant funds is now needed between sites due to work necessary (and not necessary) that was not anticipated in early 1992. The overall expenditures do not exceed the MSCA obligations. The status of the individual tasks (and site budgets) varies (see the individual tasks following for detailed descriptions):

A. Program Management: Normal activities continue with assuring the final adoption of RAPs at several sites -- Rhône-Poulenc (wetlands), Hewlett-Packard 640 & 1501, Hexcel, National Semi OU#2, etc. to assure that time schedules would be met. RD/RA and O&M continues at other sites.

B. Site Management System: The last published quarterly report for October - December 91 was distributed late January 1992. With the leave of absence of the Information System Technician for half of 1992 and transfer to another Board Division upon return, the Regional Board's latest approved workplan has rescoped the SMS to be less IST intensive and still provide greater public access (via BBS and limited paper copies). Expected startup of the revised SMS is mid 1993. It now appears that paper copies will still be necessary, at least of a limited nature on perhaps an annual basis, but that the updates will be maintained on the BBS.

D. Community Involvement: Up-to-date and continuing; see specific item. Work was also significant on an update of the 1989 EPA brochure on "Status of Superfund Groundwater Cleanup in the South Bay" with publication and distribution expected mid-1993.

E2. NPL Site Oversight: Currently, we are able to keep up with the staff work load although some schedules have slipped and are still slipping [e.g. Rhône-Poulenc/Sandoz(wetlands OU), HP 640 Page Mill and HP 1501 Page Mill, National Semiconductor OU#2]. The typical scenario finds that as the cleanup tasks in the RI/FS workplan become solidified and finalized that details formerly unknown or unresolved take on an importance not previously appreciated (e.g. HP sites). Some unforeseen slippages in the current MSCA schedules have occurred and probably will occur again (e.g. agency agreement and oversight for the wetlands portion of Rhône-Poulenc, etc.). State staff will do everything in their power to minimize slippage. Additionally, the utilization of Operable Units is being used (e.g. NSC) where a firm decision can be made on a given unit *and* a final decision on the remainder of the site can not be made for a considerable time (e.g. one year or longer). A review of the site schedule (page III-5) indicates actual and probable slippage from the schedules updated for the most recent award and as changed since the last quarter's report. Details on the slippages are covered later by site, but generally they can still be categorized into four categories:

1. Upon review of the PRP submitted RI/FS and proposed RAP, the report and recommendations are inadequate and require significant administrative changes to meet EPA guidance documents; these comments come from both RWQCB and EPA staff [e.g. National Semiconductor/Advanced Micro Devices (Arques)].

2. Finishing up the RI/FS and RAP, "holes" are found in the RI/FS and RAP that must be covered with further field work and/or investigations (e.g. Rhône-Poulenc's risk assessment and both HP sites).

3. New information comes to light (usually in the field, "one last well...") that requires radical changes to the RI/FS and RAP with their ensuing delays (e.g. the HP Palo Alto sites at earlier stages).

4. Agency and public comment require significant amendment of the FS/RAP (e.g. Rhône-Poulenc).

An additional factor that may delay RODs, but probably not the state RAPs is activity by the State Department of Health Services in the preparation of Health Assessments (HA) under contract for the Agency for Toxics Substances and Disease Registry (ATSDR) as required by CERCLA/ SARA. To date, it is still not clear what the significant differences are between ATSDR/DHS' Health Assessments and the Board's BPHE and Risk Assessments or how they will be involved in RAP/ROD decision-making since the HA will not normally be available until after the Board adopts a RAP. To date, no ROD has been knowingly held up because of ATSDR's HA.

Mitigating these potential delays is the fact that the Board has required interim remediation, the definition work has been mostly completed (exception, but nearing completion -- HP's 640 and 1501 Page Mill sites in Palo Alto; and NSC OU#2), and the Board can implement enforcement quickly where needed and necessary. Staff is aware of slippages and is working to assure completion to the amended schedule as well as preventing further slippage. At this time no enforcement is planned.

Internal over expenditures by site are primarily caused by several administrative problems:

- Within the tasks, CALSTARS reports utilized currently do not provide an appropriate breakout between indirect costs and contract costs.

- Within the task by site, over expenditures are caused by the implementation of specific site budgets where none existed before and unanticipated work or difficulty of work that could not be foreseen by the original budget. With the new award of June 1992, redirection corrected this problem (by task) as it stood then, but additional, unanticipated site work has caused some overexpenditures on some of the sites. For tracking purposes, the overall *total* task and grant budget must be utilized.

- The grant award was late due to delays in the submission and award; earlier over expenditures are now covered by the July 1990 and May 1991 award budgets and were partially reconciled with the June 1992 grant award budget redirections. No additional overall funding is requested at this time, but additional redirections will be necessary with the remaining partial award.

- To facilitate cost-recovery, all non-site specific work (Tasks A, B, etc.) is allocated monthly to the MSCA sites in proportion to the site activity for the month. Again, the real test of budget and spending at this time is to compare the *total* "bottom line".

Under expenditures are usually caused by changes in work, over estimation of work (usually anticipated problems do not appear), delays in site cleanup (staff work not able to be performed due to project delays and awaiting reports), and changing requirements (dropping significant assistance at the MEW sites).

E3. EPA Coordination: This task has been eliminated in the January 1992 amended workplan with all such "EPA coordination" activities being charged to the site that the staff is assigned to regulate or support.

The table on page III-6 is a summary of the grant budget status of all the sites and shows the approved budget and total estimated expenditures for staffing, expenses and contracts during the quarter and the life of the Cooperative Agreement (Phase II) since initial award April 13, 1988, including the July 90, May 91, and June 92 awards. The Regional Board Program Manager has requested a redirection between sites to cover overages (see February 9 letter and May 3, 1993 memorandum respectively); no overall increase in total budget is foreseen due to these charges at this time (in fact a decrease in budget is proposed for FFY 93).

Forecasted MSCA Tasks and Activities Next 3 - 6 Months:

--Significant activity is expected as shown in the MSCA Schedule (see page III-5) to complete RI/FS (HP 640 and 1501, Hexcel), and proposed amended RAP for Applied Materials Soils OU, and finalize Rhône-Poulenc's Wetlands RI/FS Investigation) as well as some informal Public Meetings near sites to receive comment on various phases of projects.

--Maintain time schedules in Community Relations Plans in coordination with overall schedule, especially Hexcel and Hewlett-Packard(s).

--Amend and extend where necessary MSCA contracts and Interagency Agreement with DHS (Data Validation).

SOUTH BAY MSCA GRANT SCHEDULE REQUIREMENTS

(updated 5/15/93 by RWQCB; changes since last report shown w/#)

Site	RI/FS and RAP Completed and Available for Public Comment		Final RAP/ROD Adopted	
	mo/yr	FFY/Q	mo/yr	FFY/Q
1. Advanced Micro Devices - Arques	*RI/FS adopted; ROD signed; RA and O&M underway*			
2. Advanced Micro Devices - Bldg 901/902	*RI/FS adopted; ROD signed; RA and O&M underway*			
3. Advanced Micro Devices 915	*RI/FS adopted; ROD signed; RA and O&M underway*			
4. Applied Materials				
Groundwater Operable Unit	*RI/FS, RAP adopted; ROD (groundwater) signed; RA and O&M underway*			
Soils Operable Unit	4/93#	93/3#	6/93#	93/3
5. CTS Printex	*RI/FS and RAP adopted; ROD signed; RA and O&M underway*			
6. Fairchild, San Jose	*RI/FS and RAP adopted; ROD signed; RA and O&M underway*			
7. Hewlett Packard, 1501 Page Mill	6/93	93/3	10/93	94/1
8. Hewlett Packard, 640 Page Mill	10/93	94/1	3/94	94/2
9. Hexcel	9/92	92/4	11/92	93/1
10. Intel Magnetics / Micro Storage	*RI/FS adopted; ROD signed; RA and O&M underway*			
11. Intel Santa Clara III	*RI/FS & RAP adopted; ROD signed; RA and O&M underway*			
12. International Business Machines	*RI/FS and RAP adopted; ROD signed; RA and O&M underway*			
13. Intersil / Siemens	*RI/FS and RAP adopted; ROD signed; RA and O&M underway*			
14. National Semiconductor				
Operable Unit 1	*RI/FS adopted; ROD signed; RA and O&M underway*			
Operable Unit 2	TBD (early 94)#	TBD (early 94)#	TBD (mid 94)#	TBD (mid 94)#
15. Rhône Poulenc/Sandoz Crop Prot Corp				
Uplands Operable Unit	*RI/FS adopted; ROD signed; RA completed 11/92*			
Wetlands Operable Unit	TBD(1/94?)	TBD (94/2?)	TBD (4/94?)	TBD (94/3?)
16. Signetics	*RI/FS adopted; ROD signed; RA and O&M underway*			
17. Solvent Services	*RI/FS & RAP adopted; ROD signed; RA and O&M underway*			
18. Spectra Physics	*RI/FS adopted; ROD signed; RA and O&M underway*			
19. Synertek 1	*RI/FS & RAP adopted; ROD signed; RA and O&M underway*			
20. Teledyne	*RI/FS adopted; ROD signed; RA and O&M underway*			
21. TRW/FEI Microwave	*RI/FS adopted; ROD signed; RA and O&M underway*			
22. Van Waters & Rogers	*RI/FS and RAP adopted; ROD signed; RA and O&M underway*			

TBD=To Be Determined

Notes: Federal lead sites, for which RWQCB receives funding under MSCA for its support activities, have identical milestones, but are not included here since the RWQCB is not responsible for meeting those time schedules. The State-required RAPs are not adopted until the NBAR is completed; does not affect the Federal Superfund process, only state required Non-Binding Allocation of Responsibility (i.e. NBAR).

C:\123R2\DATA\PFA\R2MSCA.WK1

MSCA EXPENDITURE/DRAWDOWN DATA
MULTI-SITE THROUGH 03/31/93

MSCA PHASE II PROJECT #	ACCOUNT NUMBER	AMOUNT AUTHORIZED	BAL OF AWARD 89-V-006	PROPOSED BUDGET CHANGE	TOTAL AUTHORIZED	ALL FISCAL YEAR DATA: CUM EXP	CUM DRAWS	DIFF	NEXT DRAW	UNABLE TO DRAW
MSCA02-00		0.00			0.00	0.00	0.00	0.00	0.00	0.00
MSCA02-01		0.00			0.00	3.35	0.00	3.35	0.00	3.35
MSCA02-02	K382/KN82	157,528.00	12,945.00	6,934.00	177,407.00	134,407.14	131,154.20	3,252.94	3,252.94	0.00
MSCA02-03	K3H1/KNH1	130,184.00	12,945.00	12,941.00	156,070.00	99,541.67	97,961.29	1,580.38	1,580.38	0.00
MSCA02-04	KN83	245,248.00		11,875.00	257,123.00	279,692.22	245,248.00	34,444.22	11,875.00	22,569.22
MSCA02-05	K382/KN82	35,613.00	11,030.00	4,836.00	51,379.00	7,720.11	7,719.14	0.97	0.97	0.00
MSCA02-06	K384	48,408.00			48,408.00	64,101.55	48,408.00	15,693.55	0.00	15,693.55
MSCA02-07	K385	271,777.00		55,271.00	327,048.00	214,982.32	207,027.92	7,934.40	7,934.40	0.00
MSCA02-08	K3H9	407,106.00		40,874.00	447,980.00	344,431.87	339,283.03	5,148.84	5,148.84	0.00
MSCA02-09	K340/KN40	71,058.00	11,030.00	9,641.00	91,729.00	53,670.99	51,936.57	1,734.42	1,734.42	0.00
MSCA02-10	K386	38,408.00			38,408.00	6,002.67	6,001.76	0.91	0.91	0.00
MSCA02-11	K388/KN88	118,452.00	11,030.00	220.00	129,702.00	125,991.30	125,109.57	881.73	881.73	0.00
MSCA02-12	K387/KN87	170,899.00	11,030.00	220.00	182,149.00	160,865.18	155,729.05	4,936.13	4,936.13	0.00
MSCA02-13/20	K3J2/KNJ2	118,345.50	11,030.00	12,247.00	141,622.50	117,144.81	115,935.74	1,209.07	1,209.07	0.00
MSCA02-14	KN89	47,178.00		12,233.00	59,411.00	57,743.03	47,178.00	10,565.03	10,565.03	0.00
MSCA02-15	K3C7	4,620.00			4,620.00	0.00	0.00	0.00	0.00	0.00
MSCA02-16	KN90	217,117.00		17,746.00	234,863.00	234,198.79	217,117.00	17,081.79	17,081.79	0.00
MSCA02-17	KN91	300,623.00		(7,835.00)	292,788.00	330,033.40	300,623.00	29,410.40	(7,835.00)	37,245.40
MSCA02-18	K3H5/KNH5	151,844.00	10,083.00	926.00	162,833.00	147,951.99	146,914.95	1,037.04	1,037.04	0.00
MSCA02-19	K393	28,408.00			28,408.00	6,212.86	5,880.31	332.55	332.55	0.00
MSCA02-20	K3J2	118,345.50			118,345.50	96,444.58	95,466.10	978.48	978.48	0.00
MSCA02-21	K394/KN94	125,390.00	12,945.00	555.00	138,880.00	125,852.07	122,816.08	3,035.99	3,035.99	0.00
MSCA02-22	K3K1/KNK1	162,354.00	14,530.00	7,036.00	183,920.00	140,470.43	133,546.07	6,924.36	6,924.36	0.00
MSCA02-23	K3K3/KNK3	127,045.00	11,030.00	220.00	138,295.00	108,629.30	106,458.29	2,171.01	2,171.01	0.00
MSCA02-24	K3K4/KNK4	165,091.00	12,945.00	7,036.00	185,072.00	133,568.08	130,533.02	3,035.06	3,035.06	0.00
MSCA02-25	K395/KN95	157,952.00	14,530.00	7,036.00	179,518.00	140,543.78	134,000.57	6,543.21	6,543.21	0.00
MSCA02-26		0.00			0.00	0.00	0.00	0.00	0.00	0.00
MSCA02-27	K396/KN96	208,905.00	10,083.00	5,025.00	221,993.00	177,897.23	176,946.40	950.83	950.83	0.00
MSCA02-28	K397/KN97	39,408.00	8,770.00	220.00	47,398.00	34,727.76	33,616.63	1,111.13	1,111.13	0.00
MSCA02-29	KN98	431,680.00		46,279.00	477,959.00	378,682.58	369,245.02	9,437.56	9,437.56	0.00
MSCA02-31	K3F6/KNF6	38,591.00	5,305.00	118.00	44,014.00	10,370.59	9,435.58	935.01	935.01	0.00
MSCA02-32	K3J9/KNJ9	164,154.00	11,030.00	220.00	175,404.00	133,185.78	132,043.24	1,142.54	1,142.54	0.00
MSCA02-33	KNJ1	277,412.00		11,648.00	289,060.00	208,896.46	206,060.55	2,835.91	2,835.91	0.00
MSCA02-34	K3R3	27,997.00		220.00	28,217.00	20,470.86	17,494.48	2,976.38	2,976.38	0.00
MSCA02-35	KN47	8,078.00		18,575.00	26,653.00	27,087.72	8,078.00	19,009.72	18,575.00	434.72
MSCA02-36	KNM6		206,988.00	(377,441.00)	(170,452.00)	2,447.88	1,639.65	808.23	0.00	808.23
		4,812,109.00	398,240.00	(95,124.00)	4,916,225.00	4,123,750.15	3,926,807.21	197,142.94	120,388.47	76,754.47
				SITE 64	1,309,075.00					
					6,225,300.00					
				IPA	67,358.00					
				TOTAL	6,292,658.00					

PROGRAM ELEMENT A: PROGRAM MANAGEMENT

The RWQCB is responsible for continued coordination and implementation of the South Bay MSCA Program. These activities include, but are not limited to, the following:

- *Maintaining the direction, scope, and quality of the South Bay Program*
- *Planning and oversight of the overall program schedule and budget*
- *Interagency coordination*
- *Staffing requirements and recruitment*
- *Supervision of Community Involvement*
- *Program analysis and development*
- *Supervision of procurement*

Product

The products for Task A are the successful completion of all the tasks identified and funded under this phase of the South Bay MSCA.

Additionally, most site-file cost-recovery work will be initially charged against this task with allocation among the sites made later depending upon the actual work necessary to establish and maintain individual site-specific cost files.

Within the overall program management, the most significant program management activities during this period involved the coordination / management necessary to meet MSCA time schedules, especially those for Rhône-Poulenc and Hewlett-Packard(s); the support as necessary for EPA's cost-recovery (primarily Teledyne/Spectra-Physics); and day to day supervision and management of ongoing MSCA tasks at ROD adopted sites (i.e. ongoing RD/RA and O&M). Significant activity is still expected over the next three months in supervising and implementing the SMS BBS.

State Budgeted Activities

Task A involves supervising and implementing specific tasks (i.e. contracts) included in the MSCA. There is no existing state-funded budget provided for this activity. All Task A funding is MSCA funded by site.

Costs

The expenditures for the quarter as well as the grant period through 31 March 1993 are combined with the other tasks and included in the Program Budget Table on page 6.

PROGRAM ELEMENT B: SITE MANAGEMENT SYSTEM

Task Description

Under the earlier and current MSCA agreements the RWQCB implemented a computerized system to track RI (site remedial investigation), FS (feasibility studies / alternatives evaluation), and the implementation of remedial action activities for use of the RWQCB, CALEPA-DTSC and EPA management personnel for use in site enforcement and task tracking.

Additionally, as part of the community involvement program the SMS has been distributed to 15 municipal agencies, 9 libraries, 7 state and federal agency representatives, 2 environmental groups, and 1 manufacturers group, as well as sold (for reproduction costs) to those desiring it (primarily consultants).

Products

No quarterly report was produced this quarter because of the revisions approved in the January 1992 workplan. The Board is now changing the SMS, at least in its present form. The 1992-93 workplan supports a significantly reduced SMS effort, at least for the "paper" portion. Regional Board will implement this "new" SMS in mid 1993 utilizing a computer Bulletin Board format with computers purchased in early December utilizing MSCA funds. The BBS went on-line March 18, 1993.

State Budgeted Activities

There is no existing State-funded budget or activities for the Site Management System.

Cost

Expenditures for Task B are included in the Program Costs Table on page 6.

PROGRAM ELEMENT D: COMMUNITY INVOLVEMENT

Task Description and Objectives

The main objectives of community involvement activities performed under the MSCA are:

Provide the general public with information on ground water systems, water supply sources, water quality, hazardous waste regulatory processes, and scope, progress and findings of remedial response activities.

Provide sufficient background information about technical and environmental issues to help the public understand and assess remedial actions.

Provide information, especially technical findings, in a form understandable to the general public.

Provide elected officials and the media with timely detailed information at key points throughout program activities.

Use the media as a major means of disseminating information to the general public.

Establish a two-way information exchange with environmental, public interest, and other concerned groups throughout the remedial response program.

Provide the means for all interested individuals to express concerns and make inquiries throughout project activities. (the opportunity for two-way communication is particularly important because of the length and complexity of the project).

Use the Groundwater Task Force, for overall coordination and review of community involvement efforts.

Create an interagency community involvement team to further coordinate the flow of information from agencies to the public.

Monitor public concerns and information needs

Modify the community involvement plan(s) to respond to changes in community attitudes and needs.

Community involvement activities conducted under the MSCA function independently, but coordinated with, EPA's area wide community involvement strategy as well as DHS's site community involvement programs. Under this approach, EPA assumes the lead role in coordinating area-wide community involvement activities in the South Bay. Specifically, the RWQCB will be responsible for providing information and directing community involvement activities for RWQCB-lead sites.

Products

The following activities were completed during the Quarter, primarily utilizing IPA staffing with student assistance:

1. The February monthly staff training session on Media Relations was prepared and presented by Jim Thompson and Susan Gladstone. Assistance was provided by representatives from both federal and California EPA agencies.

2. Assistance was provided to the Executive Officer in preparing a written policy statement and guidelines for Regional Board Staff on dealing with members of the news media.

3. A draft fact sheet on modifications to the Applied Materials site cleanup plan and order was prepared and reviewed by the federal EPA, representatives of the company, their consultants, and the City of Santa Clara.

4. Preparations for a local meeting on the Applied Materials site cleanup plan

modifications were begun. The meeting was held at the Embassy Suites Hotel across the street from the facility. Employees of Applied Materials and other companies around the site are the target audience, since the facility is not located in residential neighborhood.

5. Members of the South Bay Division and Community Relations staff made a short presentation and answered questions at a meeting of a Sunnyvale School Parents Advisory Council. The topic was the AMD/Signetics/TRW Superfund sites, and their impact on the San Miguel School. Results of the indoor air study at the school was presented by Dr. Marilyn Underwood of the DHS Epidemiology and Toxicology Branch.

6. Steven Hill, Carla Dubé, and Jim Thompson made a short presentation on the Teledyne/Spectra-Physics site to a meeting of employees at Abbott Laboratories Hospital Equipment Div. in Mountain View. Abbott employees had observed the investigation and cleanup actions at the adjacent Spectra-Physics facility, and were concerned about any possible effects on Abbott facilities or employees.

7. Monthly meetings continue to be held with members of the Barron Park Association Foundation, Hewlett-Packard, Varian, and the RWQCB Project Manager regarding actions at the HP sites in Palo Alto. A community meeting on the HP 640 site (California, Olive, Emmerson Streets area) is planned for June.

8. A copy of the Signetics mailing list was provided to the Cal EPA DTSC Community Relations Officer for use in their RCRA Permit notification.

9. Previously published Fact Sheets on the various sites continue to be mailed to persons who call or write requesting information. Many of the requests are from persons buying or selling property, real estate sales persons, and insurance company representatives.

10. A fact sheet and update on the Intersil / Siemens site in Cupertino was completed and mailed to residents and businesses in Cupertino, Santa Clara, and Sunnyvale.

11. Two meetings were held with Darrel Oliver of the SWRCB Water Rights Div. Graphic Arts group to discuss graphic design for a report on the South Bay Superfund sites. Extensive revisions were made to the text in response to comments from various groups.

Future Activities

Future activities are currently scheduled to meet the MSCA Special Conditions time line (as revised) requirements. Although IPA staffing is reduced from a year ago, current IPA staffing better matches the forecasted Community Involvement needs. Backup as needed will be provided by Board staff and this may require changing some contract funds to personal services funds at a later date.

Costs

Work on this MSCA task is primarily by a contract IPA with very limited state employee participation. This task accommodates the budget necessary for site-specific NPL Community Involvement programs above and beyond technical (i. e. engineer/geologist) assistance which is already budgeted within the NPL Site Oversight task. See the Table on page III-6 for overall grant budget status that includes Community Involvement costs by site.

PROGRAM ELEMENT E: TIER I ACTIVITIES

Tier I activities are those activities that occur at specific sites in the South Bay.

TASK E1.*	IDENTIFICATION OF NEW SITES	TASK E2.	RWQCB OVERSIGHT OF NPL PRP ACTIVITIES
TASK E1a.*	SCREENING OF NEW SITES IN ORDER TO CONDUCT Pas ON MOST SENSITIVE SITES		
TASK E1b.*	OVERSIGHT OF PRP SI		

*Note: These tasks were not requested for funding in this Phase; they may be considered at a later time if conditions change.

Regional Board activities in this task cover the RI/FS oversight and/or regulation underway at the 31 South Bay MSCA Superfund sites (32 companies/agencies either final and proposed including Hexcel in the Livermore Valley and Liquid Gold and United Heckathorn in Richmond) for which the Board as a regulatory agency has either the current lead (22) or the supporting agency role (9). The current Agency-Lead and NPL Status as of this report are covered below.

EPA Lead Superfund Sites:

*1. Fairchild Semiconductor Corp., 464 Ellis St., Mountain View
*2. Intel Corp., 365 E. Middlefield Rd., Mountain View
3. Jasco Chemical Company, 1710 Villa St., Mountain View
4. Lorentz Barrel and Drum, 1515 S. 10th St., San Jose
5. Moffett Naval Air Station, Sunnyvale
*6. Raytheon Company, 350 Ellis St., Mountain View
7. United Heckathorn, Richmond
8. Westinghouse Electric Corporation, 401 E. Hendy Ave., Sunnyvale

RWQCB Lead Superfund Sites:

*1. Advanced Micro Devices, 901 Thompson Pl, Bldg.901, Sunnyvale
2. Advanced Micro Devices, Bldg. 915., 915 Deguigne Dr., Sunnyvale
*3. AMD-Arques, (formerly Monolithic Memories, Inc.), 1165 East Arques Ave., Sunnyvale
4. Applied Materials, 3050 Bowers Avenue, Santa Clara
5. CTS Printex, 1905-1931 Plymouth St., Mountain View
6. Fairchild Camera and Instrument Corp., Bernal Road, San Jose
7. Hewlett-Packard, 640 Page Mill Rd., Palo Alto
8. Hewlett-Packard, 1501 Page Mill Rd., Palo Alto
9. Hexcel, Livermore
10. Intel Facility III, 2880 Northwestern Parkway, Santa Clara
11. Intel Magnetics/MicroStorage, 3000 Oakmead Village Dr., Santa Clara
12. International Business Machines, Cottle Road, San Jose
*13. Intersil, Inc., and Siemens Components, Inc., Cupertino
*14. National Semiconductor, 2900 Semiconductor Dr., Santa Clara
15. Rhône-Poulenc/Sandoz, 1990 Bay Road, East Palo Alto
*16. Signetics, 811 E. Arques, Sunnyvale
17. Solvent Services, 1022 Berreyessa Road, San Jose
*18. Spectra-Physics, Inc., 1250 West Middlefield Road, Mountain View
19. Synertek #1, Santa Clara
*20. Teledyne Semiconductor, 1300 Terra Bella Ave., Mountain View
*21. TRW Inc., 825 Stewart Pl., Sunnyvale
22. Van Waters & Rogers, Inc., 2256 Junction Ave., San Jose

* above sites will be treated as part of a combined site, at least for off-site work.

Cal/EPA-DTSC Lead Superfund Sites:

1. Liquid Gold, Richmond

EPA NPL Modifications (RCRA "drop" sites):

EPA's proposed rule-making in June 1988, (NPL Update #7) recommended that 6 NPL sites be deleted from the NPL since they are RCRA sites. Two other RCRA sites were proposed to be retained on the NPL. RWQCB officially commented to EPA-HQ on this proposal to delete high-priority RCRA sites by questioning the timeliness of the RCRA regulation update, future MSCA funding for these CERCLA/RCRA sites, and the lack of Technical Assistance Grants to citizen groups for RCRA (only) sites. EPA-IX has stated that the RCRA sites (proposed deleted and those remaining) will be treated as NPL sites to assure attention to cleanup appropriate to their NCP HRS scoring.

On October 4, 1989, EPA announced its final rule on the dropping of some of the NPL sites that are also RCRA sites. Under this rule, the following sites have been dropped from the NPL:

Hewlett-Packard, 1501 Page Mill Road
IBM, San Jose
Rhône Poulenc/Sandoz, East Palo Alto
Signetics, Sunnyvale
Van Waters and Rogers, San Jose

EPA and the Board, per policy, continue to treat the RCRA "drop" sites the same as NPL sites in terms of requirements, tasks, and cleanup.

Products during Reporting Period:

Regional Board actions / Orders affecting the South Bay MSCA:

January: None
February: None
March: Teledyne/Spectra-Physics--status report

South Bay MSCA Superfund Site Cleanup Decisions (Remedial Investigations/Feasibility Studies/Remedial Action Plan): All the South Bay Superfund sites have performed significant amounts of work to meet Superfund final cleanup decision requirements. The tasks remaining are necessary to meet State and Federal Superfund (almost all of which the State requires as well) requirements to determine the best alternative cleanup plan considering protection of public health and the environment as well as the maintenance (i.e. high quality groundwater) and protection of the resource (i.e. water conservation and reclamation).

Board staff conducted the following tasks as detailed in the EPA OSWER Memorandum dated October 1,. 1986, entitled, "CERCLA Funding of Oversight of Potentially Responsible Parties by States at National Priority List Sites. "

Review Tasks (all sites):
--Reviewed and commented on scope of work and work plans (all work plans requested and approved as of August 1990; updating due to operable units still may be necessary)
--Reviewed and commented on updates to Safety Plans
--Reviewed and Commented on drafts of portions of RI reports (all)
--Reviewed/discussed FS objectives
--Completed PRP reports (all)
--Organized and participated in technical meetings on the RI/FS with PRPs, PRP contractors, and/or EPA. (all)
--Provided Technical Support to the Community Relations Task for:
    Briefing of local and state officials
    Prepared fact sheets and press releases

Field Related Tasks:
--On-site presence/inspection as necessary (all)

In addition, at RWQCB lead sites the following tasks were in progress by RWQCB staff or contracted by the RWQCB:

--Data Validation (all by IAG with DHS)
--Public Health Baseline Evaluation
    (all work other than by PRP by contract award to ICF/Clement for both BPHE, BPHE review, and RI/FS review)
--Maintenance of the Administrative Record
    (primary use of PRPs for initial preparation)
--Continue Implementation of Cost Recovery
    (all)

For those sites where the RWQCB is the Support Agency, staff provided support in the tasks described above to the extent necessary but not to exceed the staffing levels previously approved (exceptions are noted in the Board's letter and memorandums of February 9, and May 3, 1993, respectively, requesting budget redirections and reductions for final FFY 93 award). Sites primarily affected: MEW, Lorentz, United Heckathorn, Westinghouse, JASCO, Liquid Gold.

For those sites under Regional Board lead, the IBM, Fairchild San Jose, Applied Materials (groundwater Operable Unit), Intel SCIII, Intersil/Siemens, Solvent Services, AMD 901/902, AMD 915, AMD Arques, CTS Printex, National Semiconductor OU#1, Microstorage/Intel Magnetics, Signetics, Rhône-Poulenc/Sandoz (Uplands OU), TRW/FEI Microwave, Teledyne, Spectra-Physics, Synertek #1, and Van Waters & Rogers, sites have completed the RI/FS and RAP and a ROD has been signed in this MSCA grant phase (See Table, Page III-5).

Costs and Budgets:. Even with the addition of the June 1992 grant award and the budget redirection among sites, some **site specific** over- and under- expenditures are occurring. While no new grant funds will be required, proposed redirection among sites will be necessary as an revision to the proposed second partial award in spring 1993.

The following is a description of the MSCA funded staff work and the current status at each of the MSCA Superfund sites.

REGIONAL BOARD LEAD SUPERFUND SITES:

ADVANCED MICRO DEVICES 901-902, SIGNETICS, TRW (FEI) MICROWAVE (THE COMPANIES)

AMD OPERABLE UNIT The groundwater monitor report for the AMD operable unit was submitted in January 1993 and covered the period from October 1992 to December 1992. The six-well extraction system pumped an estimated 3.4 million gallons during the fourth quarter of 1992. As expected, the majority of this water was extracted from the B1 and B2 water-bearing zones. Water levels in the A-aquifer showed slightly lower levels than in the third quarter with six of sixteen wells dry. Water levels in the B-Aquifer were also lower than the third quarter 1992.

Two new extraction wells were completed; one in the B1-aquifer (DW-7), and one in the B2 aquifer (DW-8). Water volumes listed above do not include pumping from these wells because they had not yet been plumbed to the treatment system.

A revised sampling plan was submitted and approved with revisions during February 1993. Sampling of the B3-aquifer well is being continued to provide information on any future contaminant migration in the vertical direction.

A summary of contaminant removal and extraction system operation through the fourth quarter was included in the report delivered in January 1993. Based on average contaminant concentrations, the system removed about 125 pounds of VOCs during 1992 for a total of 457 pounds removed since the project began in 1984. The system extracted and treated 3.4 million gallons of water during the fourth quarter of 1992 for a cumulative total of over 63 million gallons since the project began.

Analysis for a Title 22 priority pollutants detected selenium above drinking water standards at up to 40 ppb. Elevated selenium is typical for groundwater in the region.

SIGNETICS OPERABLE UNIT The progress and monitoring report for the fourth quarter 1992 at the Signetics operable unit was submitted in January 1993. Field activities for the first quarter 1993 groundwater monitoring report were completed in early January 1993.

Groundwater levels rose slightly during the fourth quarter due to the temporary shutdown of the extraction system to construct modifications and upgrades. The newly expanded extraction system has operated through the first quarter 1993 and performance data will be available at the end of April 1993.

The extraction system removed more than 8 million gallons of water during the fourth quarter of 1992. The average extraction rate for the fourth quarter was 61 gallons per minute. The majority of the water extracted is attributable to the B-zone extraction wells and the 440 Wolfe building sump. However, the majority of contaminant removal is attributable to the B-zone extraction wells since contaminant concentration is lower in the water captured by the building sump.

The treatment system was in compliance with NPDES requirements. Groundwater pumping resulted in an estimated removal of 247 pounds of TCE during the fourth quarter 1992. The groundwater extraction systems have removed more than 14,000 pounds of TCE since 1987. The soil vapor extraction system removed 50 pounds of VOCs during the fourth quarter of 1992. The vapor extraction system has removed a cumulative 665 pounds since its inception in 1988. The newly expanded vapor extraction system produced 2.5 times the amount of VOCs extracted during the previous quarter.

No notable changes in contaminant concentration trends were recorded. In addition to analysis for VOCs, 24 wells were analyzed for priority pollutant metals. Selenium was detected above the applicable drinking water standards in several wells, including two "background" wells.

TRW OPERABLE UNIT Field activities for the fourth quarter groundwater monitoring report were completed in October 1992. The progress and monitoring report for the fourth quarter at the TRW operable unit was submitted in January

1993. The treatment system operated throughout the fourth quarter with minimal down-time.

The air stripping system was upgraded with new stripper media, wiring, and control systems. A soil vapor extraction system is currently being designed and construction should be completed in May 1993. A meeting was held with TRW to discuss site modifications necessary for the installation of the new system.

Anomalously high water levels in some A-zone wells were the result of a leaking sanitary sewer line. This accounted for increased rates of groundwater extraction in several A-zone extraction wells. The sewer line is leaking deionized water that is discharged from an overflow on the deionizing unit.

No significant changes in contaminant concentration or distribution were reported for the fourth quarter 1992. The average extraction rate for the seven extraction points was 17.5 gallons per minute during the fourth quarter for a total of 1.5 million gallons. Based on average contaminant concentrations at the treatment system influent inlet, this results in a total removal of 452 pounds of VOCs during 1992. The cumulative VOC removal since 1985 is estimated to be over 2200 pounds of VOCs.

OFFSITE OPERABLE UNIT The progress and monitoring report for the fourth quarter 1992 for the Offsite operable unit was submitted in January 1993. The extraction and treatment system required significant maintenance during the fourth quarter and several extraction wells were out of operation at various times. The extraction system removed almost 11.5 million gallons of water during the fourth quarter. The estimated removal of VOCs for the fourth quarter is 111 pounds. The cumulative removal of VOCs is estimated at over 4312 pounds from July 1991 through January 4, 1993.

In general, water levels in each aquifer zone declined in the fourth quarter 1992. TCE concentrations decreased in 54% of the groundwater samples from the last time each was sampled.

A meeting was held with representatives from all three companies to discuss a new sampling plan for the offsite unit. A modified sampling plan was approved.

Board staff attended a meeting of the Sunnyvale School Board in March to discuss the reopening of San Miguel School which is directly over the offsite groundwater plume. The primary concern was impact on children at the school. Personnel from the California Department of Heath Services also attended and presented the results of an indoor air study at the school which showed that there is no increased risk of cancer from the contaminated groundwater at the site.

REGULATORY EVENTS: JANUARY THROUGH MARCH 1993 None

PROJECTED EVENTS: MARCH THROUGH JUNE 1993 Quarterly monitoring of the remediation activities at the site will continue through the next reporting period.

ADVANCED MICRO DEVICES, BUILDING 915, 915 DEGUIGNE DRIVE, SUNNYVALE

ACTIVITIES: JANUARY THROUGH MARCH 1993 The quarterly monitoring report was submitted in April 1993. The data collection for this period was completed in early January 1993. The majority of A-zone wells (7 of 13) were dry at the time quarterly samples were collected. As a result, groundwater extracted at the site is produced primarily by the B-aquifer. Groundwater elevations were generally lower in January 1993 than in October 1992.

Approximately 8.5 million gallons of groundwater was extracted during the period from 5 October 1992 to 4 January 1993. This translates into an average pumping rate of approximately 8 gallons per minute for the eight extraction wells. The new extraction well EW-9 is not yet operational.

Estimates of contaminants removed from the site by the groundwater extraction system have been updated through the fourth quarter of 1992. The estimate of total VOCs removed since 1984 by groundwater extraction is 3922 pounds with 38 pounds removed during the fourth quarter 1992.

The extracted groundwater treatment system was in compliance with NPDES requirements during the fourth quarter. Selected wells were analyzed for Title 22 metals. No samples detected Title 22 metals above applicable detection standards.

A report documenting the evaluation of the extraction system in the B-2 zone and the

installation of an additional B-2 extraction well (EW-9) was submitted in early January 1993. The contaminant plume had been detected in the two downgradient monitoring wells located off-site to the north (MW-44, MW-45). Extraction well EW-9 is now expected to capture the plume and control further migration from the site.

REGULATORY EVENTS: JANUARY THROUGH MARCH 1993 None

PROJECTED EVENTS: APRIL THROUGH JUNE 1993 Quarterly reports documenting progress will be submitted throughout 1993. The impact of upgradient sources on the AMD 915 system will continue to be monitored. Documentation of the effectiveness of the additional extraction well will be included in each quarterly report in 1993.

UNRESOLVED ISSUES: Evaluation of the effectiveness of modifications to the B2 aquifer extraction system and control of migration of contamination.

APPLIED MATERIALS, INC.
3050 BOWERS AVENUE, SANTA CLARA

SITE ACTIVITY/ACCOMPLISHMENTS

1. Monthly reports (NPDES) are being submitted as required. There were no reported discharge violations but there were reported lapses in recording daily flows both in January and February (the March report is not due before April 15). We have been informed that Applied Materials is taking measures to ensure that all requirements of the Orders, including reporting daily flows, will be complied with.

2. Applied Materials has provided an update for calendar year 1992 for the Administrative Record.

3. Applied Materials submitted the annual report on groundwater reuse, and concluded once more that neither reuse nor reclamation is technologically or economically feasible.

4. Applied Materials submitted the annual Groundwater Self-Monitoring Report for 1992 (including the period October 1992-January 1993).

5. Applied Materials has submitted a report on vadose zone soil pollution requested by Patti Collins (U.S. EPA). Ms. Collins has requested modifications to the report. Once an acceptable report is submitted, it should be possible to complete the ROD for the site.

AGENCY (BOARD) ACTIVITY/EVENTS

1. Staff reviewed all submitted reports and commented as appropriate.

2. Staff has commented verbally to Patti Collins on the vadose zone soil pollution report submitted by Applied Materials.

3. Staff has prepared a Tentative Order to amend Site Cleanup Requirements, to be introduced at the April Board Meeting. Public comments will be accepted until May 14, and an Order will be considered for adoption at the June Board Meeting.

4. Staff has reviewed Applied Materials' suggested changes to our Draft comments on the soil-investigation report submitted previously by Applied Materials, and has finalized our review comments. These are presented as the Staff Report accompanying the EOSR for the Tentative Order to be introduced at the April Board Meeting.

5. Jim Thompson has completed a Fact Sheet for the site, and is arranging an Open House and Local Meeting in Santa Clara, for the evening of April 21 (following the Board Meeting in Oakland). Staff will attend the Local Meeting.

6. Staff inspected the site on April 7 and collected influent and effluent water samples for analyses.

During the next quarter (April-June 1993) staff expects Applied Materials to submit routine monthly NPDES permit reports, and (perhaps) the periodic monitoring report for the February-May 1993 period. Staff will participate in a Public Meeting and Open House near the site in Santa Clara, and will attend Board Meetings in April and June to introduce and recommend adoption of amendments to the Site Cleanup Requirements. An inspection report will be prepared after laboratory analytical results are

received. Board staff may prepare the ROD for soil cleanup.

CTS PRINTEX, 1905, 1911, 1921, AND 1931 PLYMOUTH STREET, MOUNTAIN VIEW

CURRENT STATUS: On January 15, 1993, CTS submitted an evaluation of the progress of cleanup measures attached to the 1992 Annual Report. During 1992, approximately 2,430,000 cu feet of groundwater was extracted, removing about 14.2 pounds of chemicals of concern. The total chemicals removed to date since 1989 is approximately 93.6 pounds. According to modeling efforts and comparison to empirical data, CTS believes the plume is effectively being contained. Based on groundwater data from monitoring well 39W, and the modelling done for the evaluation, they maintain that an upgradient source exists.

Groundwater extraction systems continued operation and a report made by telephone for the first quarter 1993 groundwater monitoring indicated there was no significant change in the water table from the previous quarter. Chemical concentrations also showed no appreciable changes from the previous quarter. The first quarter groundwater monitoring report is due April 15, 1993.

PROJECTED ACTIVITIES FOR NEXT SIX MONTHS: With regard to investigating possible upgradient sources, Regional Board staff will recommend that CTS be requested to provide current tenant and owners for businesses upgradient of well 39W. If CTS will agree to do a preliminary survey of the types of businesses in the area which may use solvents, and to provide the Regional Board names, addresses and telephone numbers of individuals to contact, staff can then send out chemical inventory requests. At this time, staff resources are not available to do title and records search. Whether or not an upgradient source is identified, CTS believes they are capturing the chemicals moving into their capture zone.

No new tasks are required; groundwater extraction and monitoring will continue.

FAIRCHILD, SAN JOSE

The final Remedial Action Plan (RAP) was adopted by the Regional Board in January 1989. The RAP set cleanup standards for on-site groundwaters at MCLs and for off-site groundwaters at less than one fourth the MCLs. In order to help meet these cleanup standards, soil cleanup goals were set for the on-site area, which is surrounded by a slurry wall. The Regional Board amended the RAP in May 1990 in response to soil-cleanup issues raised during an appeal. This modification allowed Fairchild to demonstrate that its prior soil cleanup was sufficient to protect groundwater. Fairchild would return water to the on-site aquifers and see whether chemicals remaining in the soil leached out. RAP modifications do not change the groundwater cleanup standards, but rather the methods used to achieve those standards.

Fairchild proposed three further modifications to its remedial program in September 1991: (i) a new on-site extraction well, (ii) cyclic groundwater pumping on-site (one month on, two months off), and (iii) a one-year shut-down of the off-site extraction wells. Board staff approved all three. The first two modifications, implemented in late 1991, are intended to enhance the efficiency of the on-site remedial actions. The third modification, implemented in December 1991, is based on computer modeling which shows that groundwater pumping is ineffective in speeding up remediation of the aquifers at this site. This model predicts that off-site cleanup will take 15 years, whether or not off-site pumping occurs.

During the last quarter, Fairchild operated the on-site extraction system for one month (January), discharging the treated groundwater to the storm drain. Pumping rates averaged 50 gpm in January, with a total of 2.1 million gallons of groundwater and 26 pounds of VOCs removed. This is consistent with the cyclic pumping plan cited above. On-site groundwater data suggest that VOC concentrations are declining but that cleanup goals are still exceeded in the area near the former underground tank.

The off-site extraction wells were shut down as part of the approved one-year demonstration project, which ended in December. In late December, Board staff approved Fairchild's request to continue the no-pumping program pending its submittal of a report on the one-year project. Fairchild submitted the report in mid-February. The report concluded that VOC concentrations had not increased or migrated during the one-year project, and proposed to

continue the no-pumping program for another year.

During the next six months, Fairchild will continue its cyclic pumping program on-site (final report on this program due in January 1994). Board staff will review the off-site report and decide whether to extend the no-pumping period. The 5-year review for this site is due January 1994.

HEWLETT-PACKARD, 640 PAGE MILL ROAD, PALO ALTO

CURRENT STATUS: An RI/FS was submitted on April 1, 1991 for on-site and off-site in the California, Olive and Emerson Streets (COE) area. The RI/FS was considered not complete due to the discovery of a more complex hydrogeologic environment then first predicted. Additional data that was required to resubmit the RI/FS has been gathered in the area east of Matadero Creek. This data has resulted in complete definition of the vertical and lateral extent of the off-site plume. The final Baseline Public Health Evaluation was completed in September 1992 by Clement International for the on- and off-site areas.

On-site excavation of contaminated soils needed for construction and demolition of old structures has been completed. Twelve off-site and on-site groundwater extraction wells have been installed as part of the Interim Remedial Measure program at the site. These wells have not yet been connected to a treatment system.

Construction activities of a new office building at the on-site property are under way after delays associated with rain. The vapor and groundwater extraction wells that will operate under the building have been completed and will be hooked up to the main treatment systems when the building is completed in the fall.

FUTURE ACTIVITIES: The outline of the revised RI/FS is currently being put together. The first draft of the revised RI/FS will not be completed until at least June 1993. The installation of the conveyance piping to connect the approved off-site extraction wells will begin to be installed in the next quarter. Additional groundwater extraction wells above what has been approved will be required in the future.

HEWLETT-PACKARD, 1501 PAGE MILL ROAD, PALO ALTO

CURRENT STATUS: Site Cleanup Requirements were adopted in June 1991 establishing RI/FS tasks and schedules. The RI/FS was originally due in June of 1991, however, due to the discoveries of additional chemical plumes and due to the need for further definition of the known plumes, this date has been informally extended by Board staff. HP submitted a revised RI in April, 1992. Board staff have reviewed the RI, and made comments to HP in December. HP and Board staff are currently discussing the comments.

The site currently has six interim remedial measure extraction wells in operation. The most recent three wells help capture the area of the northwest TCE plume with the highest chemical concentrations. The full extent of this plume off-site appears to have been defined. Additional monitoring wells need to be installed to confirm this.

The Feasibility Study was submitted in June 1992 and comments by Board staff have been returned to HP. The Baseline Public Health Evaluation is currently being revised by HP.

FUTURE ACTIVITIES: Hewlett-Packard is scheduled to finalize the Baseline Public Health Evaluation in the next quarter. A response from HP to Board staff comments on the RI will continue to be discussed in weekly meetings between Board staff and HP staff. HP response to the FS comments will be submitted after RI revisions are under way. Submittal of the RI/FS for the public comment period will occur within the next two quarters. Additional off-site work in the northwest area is scheduled to be completed this quarter. This off-site data will help define the outer extent of the northwest area plume. On-site work will consist of gathering more groundwater samples from areas where the magnitude and vertical extent of the contamination needs to be confirmed.

HEXCEL MANUFACTURING PLANT AND ABANDONED DISPOSAL SITE, LIVERMORE

Board project staff changed this quarter. Status report will be updated at a later time.

INTERNATIONAL BUSINESS MACHINES, SAN JOSE

The final Remedial Action Plan (RAP) was adopted by the Regional Board in October 1988. It set cleanup standards similar to those for Fairchild (San Jose) and included soil vapor extraction (on-site) and continued groundwater extraction (on and off-site). IBM's cleanup program is strongly affected by groundwater elevations, which vary dramatically depending on rainfall as well as recharge by the Santa Clara Valley Water District.

During the last quarter, IBM continued implementation of the RAP. IBM extracted and treated about 90 million gallons of groundwater for the quarter, reusing about 70 million gallons (or 77%) of this total volume. All on-site extracted groundwater was reused, by reinjection, landscape irrigation, or as feed water for industrial use. Most off-site groundwater was discharged to Canoas Creek. The soil vapor extraction system continued to be effective, removing 1,200 to 1,700 pounds of VOCs and hydrocarbons from on-site soils during the quarter. Reduced off-site pumping rates do not appear to be causing any migration of the chemical plume; IBM will submit an evaluation of this one-year demonstration in fall 1993.

During the next six months, IBM will continue its cleanup program. Efforts to reuse off-site extracted groundwater will be postponed, pending results of the one-year reduction and a determination of the optimal pumping rate. The 5-year review for IBM's cleanup program is due in October 1993.

INTEL, SANTA CLARA III, SANTA CLARA

The Final RAP for the site was adopted by the Board in July 1990. Intel submitted a report titled "Cyclic Pumping Demonstration Project, Evaluation and Evaluation Recommendations for Further Actions" in late 1991. Cyclic pumping (also known as pulsed pumping) is believed to be a method for improving groundwater remediation efficiencies.

Based on this October 1991 report, Intel has tried both 60-day on/60-day off and 120-day on/120-day off pumping cycles. Intel has submitted effectiveness reports on these cycles that conclude that these pumping cycles are no more efficient than continuous pumping. Board staff met with Intel to discuss the most recent results of the demonstration project in October 1992. In response to requests by Board Staff, Intel has proposed a new demonstration project involving various cyclic pumping schemes. This new project began on January 15, 1993.

On-site groundwater extraction and treatment as described above continues as part of the final remedial action at the site. Currently, approximately 30,000 gallons per day of groundwater is extracted and treated to remove volatile organic chemicals. Board staff will continue to monitor the site and review quarterly reports submitted by Intel.

INTEL MAGNETICS/MICRO STORAGE, SANTA CLARA

The Final Remedial Action Plan (RAP) for the site was adopted by the Board in July 1991.

Draft deed restrictions to prohibit the use of the shallow groundwater at the site have been submitted by the two property owners. Kim Camp III submitted it's most recent revision in response to staff comments in the fourth quarter 1992. The only remaining point of disagreement between Board staff and Kim Camp III was over the wording of the hazardous substances release disclosure statement. It appears this matter has been resolved, and it is anticipated that the deed restriction will be signed and in place during the second quarter 1993.

Intel (on behalf of the property owner, 3000 Oakmead Village Drive Ltd.) submitted its most recent revised deed restriction in the fourth quarter 1992. Board legal staff is currently trying to resolve a remaining point of disagreement with Intel.

In addition to draft deed restriction review, Board staff work scheduled for completion in the next six months includes attempting to find additional information on the chemical use history of possible upgradient pollution sources. Board staff sent a letter during the first quarter 1993 informing Boehringer Ingleheim (BI) that Board staff plans to recommend to the Board that BI be added to the site cleanup requirements. This recommendation is based on a review of the site's groundwater quality, groundwater flow, and other hydrogeologic data, which indicated that a release of solvents to groundwater had taken place during International

Diagnostic Technologies' (IDT's) tenancy at the site. BI was the parent company of IDT during the time IDT was a tenant at the site.

Currently, approximately 11,000 gallons per day of groundwater is extracted and treated to remove volatile organic chemicals. Board staff will continue to monitor the site and review quarterly reports submitted by the PRPs.

NATIONAL SEMICONDUCTOR CORPORATION (NSC) & ADVANCED MICRO DEVICES (ARQUES) (formerly Monolithic Memories), SUNNYVALE & SANTA CLARA

At the NSC and AMD sites, work completed and work projected is pursuant to the final Remedial Action Plan (RAP) adopted by the Board at its September 1991 meeting. The RAP contains compliance tasks and time schedules for the remediation of soil and groundwater in Operable Unit 1, which consists of the NSC and AMD facilities and the downgradient commingled plume area.

In the 1st quarter 1993, staff focused oversight on sites which have contributed to groundwater contamination immediately to the west of the NSC and AMD contaminant plume. Staff intend to present draft site cleanup requirements for these adjacent sites to the Regional Board in the 2nd quarter of 1993. Site investigation at these adjacent sites may involve NSC and AMD in the future.

National Semiconductor

The deed restrictions for Hewlett Packard and Shahinian Trust were recorded during the first quarter of 1993. The deed restrictions were modeled after the deed restriction for the NSC property.

Board staff provided comment to the ATSDR's public health assessment for NSC. The assessment contained several concerns and recommendations; however, these have already been addressed in the RAP adopted for the NSC site. One issue not addressed in the RAP was the sampling of indoor air at the NSC site. Although indoor air quality impacts are not considered under CERCLA, NSC has indicated to Board staff that they are willing to evaluate impacts. NSC is currently preparing a sampling plan for submittal to Board staff.

After reviewing recent monitoring well survey data for adjacent sites and Sunnyvale benchmark data, staff requested that NSC and AMD (and all adjacent Southbay cleanup sites) resurvey monitoring wellhead elevations. There exists evidence that some areas have subsided up to 5 feet since the original benchmark elevations were established in the 1950s. Once the resurvey is complete (and coordinated groundwater level monitoring commenced), contaminant migration patterns will be reevaluated.

Due to the heavy and regular precipitation during the 1st quarter 1993, no additional soil vapor extraction pilot tests or vapor well installations have been completed. Extraction of VOCs at one source area is continuing at a rate of approximately 4 pounds per day.

Board staff inspected the new Lakeside treatment system and the previously existing groundwater treatment systems. No violations of waste discharge requirements were noted in either field inspection and in the NPDES monitoring reports. Extraction rates for the first quarter 1993 are not yet available; however, during the fourth quarter of 1992, the groundwater treatment system extracted approximately 160 gallons per minute, and removed a total of 153 pounds of VOCs.

Advanced Micro Devices - Arques site

After delays in issuance of use and building permits, the soil vapor extraction system was placed in full-time operation in January 1993. Initial measurements of operating parameters for the system indicate that it is performing in accordance to design criteria. Influent vapor samples are monitored for PNA compounds to determine whether they are being extracted from the soil.

Groundwater monitoring reports and NPDES monitoring reports for the fourth quarter of 1992 have been submitted and reviewed. Operational data for the fourth quarter have not yet been submitted. Groundwater continues to be extracted from a network of on-site wells and treated. During the fourth quarter 1992, the system extracted approximately 18 gallons per minute and removed a total of 11.3 pounds of VOCs.

RHÔNE-POULENC/SANDOZ CROP PROTECTION CORP, EAST PALO ALTO

ACTIVITIES DURING JANUARY-MARCH: The Regional Board staff have coordinated agency discharger meetings to expedite review and revision of the Ecological Assessment of the Wetlands Operable Unit. Because of the large complex data set, agencies have been slow in responding with comments on the document. Currently, most obstacles have been overcome and the discharger has received final agency comments on the draft document. A letter forwarded to the discharger on April 6, 1993, initiated a 4 month schedule for revision of the document pursuant to Board Order 92-127. Because the document has increased in complexity, 4 months may not be enough time for revision and an addition 1 to 2 months may be required.

ACTIVITIES ANTICIPATED DURING APRIL-JUNE: To prevent any further delays in revision and finalization of the Ecological Assessment, Board staff will be in close contact with all agencies and the discharger. This will allow for issues which arise during the revision process to be responded to by agency before they are incorporated into the revised document.

Draft deed restrictions for properties located in the Upland Operable Unit have been submitted for Board review and comment. Staff will be working with the discharger and EPA to develop an acceptable form. It is anticipated that these documents will be finalized by June.

SIEMENS/INTERSIL, CUPERTINO

CURRENT STATUS: The final Remedial Action Plan for this site was adopted by the Regional Board in August 1990, and EPA issued a concurring ROD. The RAP called for additional groundwater extraction wells and soil vapor extraction wells. All work needed to implement the RAP has been completed. With the addition of the new wells, Intersil has 7 soil vapor wells and 7 groundwater extraction wells; Siemens has 16 soil vapor wells and 18 groundwater wells; and offsite there are 3 extraction wells. Additional treatment facilities for groundwater and soil vapor have been installed. The final off-site groundwater extraction system as proposed in the RAP has been completed.

In April 1992, Siemens/Intersil requested permission to close four deep-aquifer monitoring wells off-site, in order to avoid possible damage due to construction activities. Board staff approved the request on June 4, 1992, given that no VOCs were detected in these wells. Shortly afterward, the City of Santa Clara reported PCE concentrations slightly over drinking water standards in a down-gradient public well. Continued monitoring has confirmed the presence of PCE in the Santa Clara Well #24. The source is not believed to be Siemens/Intersil. The four deep-aquifer monitoring wells are still in existence, the Santa Clara Valley Water District has taken ownership and responsibility of these wells.

During the last quarter, monitoring and remediation continued as required by the RAP. Permission was granted to alter off-site monitoring schedule for certain wells. A discharge violation occurred at the Siemens facility from February 19-20, 1993. Approximately 28,000 gallons of untreated ground water were released due to a pump failure between the equalization tank and the air stripper. This triggered shut-down in all wells but one which was operating in the manual mode. The pump between the equalization tank and the air stripper was replaced on February 22, 1993. Siemens plans to modify the control system to ensure emergency shutdown while extraction pumps operate in the manual mode.

FUTURE ACTIVITIES: Monitoring and remediation will continue. The treatment system will be evaluated to ensure emergency shut-down in wells in the manual mode.

SOLVENT SERVICE, SAN JOSE

JANUARY THROUGH MARCH 1993: Operation of the groundwater extraction and treatment systems continued throughout the quarter. The steam enhanced vapor extraction system (SIVE) has been temporarily removed from operation to allow final installation of the cap on the site, as part of other construction activities on the site.

REGULATORY EVENTS: JANUARY THROUGH MARCH 1993--None

PROJECTED EVENTS: APRIL THROUGH JUNE 1993 -- Quarterly monitoring reports will be submitted within thirty days of the end of each

calendar quarter. The report submitted in January 1993 included a yearly summary of site activities and contaminant removal. Site construction activities began in January, which include destruction of several buildings and the installation of an asphalt cap over the entire site. Construction is continuing through the second quarter, although progress has been delayed by weather. A revised schedule of activities will be submitted by SSI during the month of April.

Site access agreements have been negotiated between SSI and Chevron that allow Chevron to install a vapor extraction system to address the free product plume on the SSI western property boundary. Final plans for the system have been completed and construction should take place during the second quarter 1993.

A report is being prepared by SSI that describes the status of soil remediation and sampling that was completed prior to construction activities in January 1993.

UNRESOLVED ISSUES: The final status of soil remediation and the long term operation of SIVE must still be resolved. The status of remediation of dissolved phase hydrocarbon, benzene, toluene, xylene and solvents on the western property boundary must be resolved following the completion of removal of free product hydrocarbon from this area. The current status of these contaminants is masked to some degree by the free phase plume.

SYNERTEK #1, SANTA CLARA

The Final RAP for the site was adopted by the Board in March 1991. Operation of the B zone groundwater reinjection system commenced in December 1991. The reinjection system consists of two extraction wells pumping a combined total of six gallons per minute (gpm) and one reinjection well reinjecting six gpm. The four A zone extraction wells continue to pump at a combined rate of about 12 gpm.

The six month hydraulic control study originally due in August of 1992 has been delayed due to the reinjection system failing and becoming non-operational as a result of calcium carbonate precipitating out of the water and clogging the system. The study was rescheduled for completion in March or April of 1993. Unfortunately, there have been continued problems with clogging, and Honeywell, as owner of Synertek, has submitted a request that the reinjection program be discontinued. The request is under review by Board staff.

Groundwater extraction and treatment continues as an integral part of the final remedial action at the site. Currently, approximately 26,000 gallons per day of groundwater is extracted and treated to remove volatile organic chemicals. Board staff will continue to monitor the site and review quarterly reports submitted by Honeywell.

TELEDYNE AND SPECTRA-PHYSICS, MOUNTAIN VIEW

CURRENT STATUS: In February of 1991 the Board adopted a final Remedial Action Plan and EPA issued a record of decision. The RAP calls for groundwater extraction off-site and at the Teledyne facility. The RAP also requires additional soil treatment at the Spectra Physics facility.

During the past quarter, on-site work at Teledyne includes the continuation of groundwater monitoring, effluent monitoring, extraction and treatment. Teledyne also initiated further investigations on their site. Soil borings were taken in the landscaped areas which revealed low VOC concentrations. In addition, certain sewer lines conditions were investigated. The separations and corrosion found in the sewer lines could have been a possible contaminant source. On-site at Spectra-Physics, soil vapor extraction continued.

Off-site, Teledyne and Spectra-Physics monitor wells and operate extraction systems north and south of the Bayshore Freeway. Additional off-site groundwater extraction wells were installed in September 1992 in the northwest corner of the plume to remove contamination that, until May 1991, was removed by the City of Mountain View Landfill groundwater extraction system.

Teledyne and Spectra-Physics submitted a petition in February 1993 requesting their final Site Cleanup Requirements be revised to alter their responsibility in four North Bayshore source areas. This issue was brought before the Board at the March 1993 meeting.

Off-site work includes investigations/remediation activities at Coastside Nursery, Montwood, Santa Clara County Transportation Agency, and 1098 Alta Avenue. The Space Park Way site is the

only site that requires initial investigation. The Regional Board is requiring the investigation and remediation at these sites.

The owners of the Alta site submitted a Phase IV Site Characterization Report in March 1993. This investigation focused on the intermediate ground water zone and is in the review process. Interim remedial actions were proposed in the Phase IV report. Additional investigation is needed off-site.

The owners of the former Coastside Nursery property submitted results of a ground water investigation. This report led staff to believe no sources exist at the Coastside Nursery site. Although VOCs were found on the site, staff believe the contamination is coming from upgradient sources such as the Santa Clara County Transit Agency, Teledyne/Spectra-Physics, or currently unknown sources.

Initial Site Cleanup Requirements were issued in January 1993 to the previous owners of the former Montwood site. Further source investigation is taking place, and a proposal was submitted for interim remedial actions.

Quarterly ground water monitoring continues at the Santa Clara County Transportation Agency, North Coach Division, and ground water remediation began in October 1992.

Owners/Occupants of the Space Park Way facilities have been requested to define their past chemical usage. After evaluating responses, which are due in April, appropriate investigations will be required.

FUTURE ACTIVITIES: Regional Board staff may use enforcement orders to provoke some investigation. It is expected that site investigations will start at Space Park Way once responses are submitted to chemical usage requests. The Montwood site is expected to further characterize and sample the area downgradient of their site. The groundwater cleanup zone comprising the North Bayshore Extraction System will be reevaluated because of the installation of extraction wells in the northwest corner of the plume, the shut-down of the groundwater extraction trench at the City of Mountain View Landfill, and the significant rising of ground water levels. A preventative maintenance program will begin for Teledyne/Spectra-Physics extraction wells/pumps. Water Board staff will be working with Teledyne and Spectra-Physics representatives to address apparent inequities outlined by their February 1993 petition.

VAN WATERS & ROGERS, INC, SAN JOSE

CURRENT STATUS: On January 29, 1993, VW&R submitted an Evaluation of Remedial Measures, as required in Regional Board Order No. 91-138. This evaluation report was to include effectiveness of groundwater extraction system and in-situ vapor extraction (ISVE) system. Since the Regional Board approved of the expanded groundwater and the ISVE systems in early January, the complete evaluation could not be completed. VW&R proposed to report on the effectiveness of the ISVE and expanded groundwater extraction system by December 31, 1993; their implementation is required by July 6, 1993.

On January 29, 1993, VW&R submitted the 1992 Annual Groundwater Monitoring Report, including an evaluation of the existing hydraulic containment and effectiveness of chemical extraction. From July through November 1992, chemical concentrations generally decreased, except notably increased in Well 15, west of the railroad spur (an area targeted for ISVE). VW&R attributed some of the increase to changes and upgrades in the extraction system, which required the system to be down at various periods throughout the latter part of the year. Time/Concentration plots from January 1983 to January 1993 for selected A-aquifer wells along the northwest property boundary reflected fluctuations, but overall decreases, in chemical concentrations. Wells near the railroad spur and the underground tank farm showed less reduction in chemical concentrations than other wells. Again, these areas are targeted for ISVE.

On February 4, 1993, Regional Board staff performed an NPDES site inspection. In general, the extraction and treatment system operation has been in a state of flux over the past year due to changes and upgrades to the system, requiring it to be shut down for various periods. In addition, one of the extraction wells (Well 29), was taken offline due to problems with siltation. Other compliance problems have plagued the system from time to time due to electrical and mechanical malfunctions. VW&R claims to continue to improve maintenance and inspection of their system.

On March 31, 1993, VW&R submitted the Status Report on Underground Storage Tanks, as required in Order 91-138. This report was required at the time the Order was adopted due to the presence of contaminants in soils beneath the tank farm, and questions related to whether the tank farm would be relocated (aboveground or to another location), or removed entirely. VW&R is still under Order to investigate, as needed, and remediate any contaminated soils beneath this area by September 1996. The status report was inadequate because it did not provide a conceptual plan for remediating contaminated soils. Although it discussed various options that VW&R has investigated for relocating the tank farm, it did not provide any clear indication as to what the outcome would be.

The first quarter 1993 groundwater status report was received by telephone. VOC concentrations generally decreased, while water table elevations increased markedly, probably due to increased precipitation. Groundwater elevation in the A-aquifer increased approximately 5 feet; B-aquifer elevations increased approximately 2 feet. No appreciable changes were noted in chemical concentrations. Piping for the expanded groundwater and ISVE systems are currently being installed; additional equipment will be arriving in May.

PROJECTED ACTIVITIES FOR NEXT SIX MONTHS: ISVE and GW Extraction systems must be implemented and report submitted by July 6, 1993. No other tasks are required except for continued groundwater monitoring.

CALIFORNIA EPA – DEPARTMENT OF TOXICS SUBSTANCES CONTROL LEAD SITE:

LIQUID GOLD, RICHMOND

CURRENT STATUS: On March 11, 1993, Southern Pacific Transportation Company submitted the final draft Remedial Action Plan for the Liquid Gold site. Other related documents generated this quarter are: March 12, 1993 - proposed Negative Declaration for the proposed remediation; March 16, 1993 - the preliminary non-binding allocation of responsibility; March 19, 1993 - the draft covenant of deed restriction (all prepared by DTSC); and March 16, 1993 - Fact Sheet Number 3 (prepared by Southern Pacific).

The public meeting for the site was held in Richmond, CA on March 30, 1993. The proposed remedial alternative consists of upland and marsh components. In the upland portion, regrading the surface of the former activity area to prevent ponding and control runoff, up to 2 feet of soil cover, planting with native species, and long-term groundwater monitoring has been proposed. The upland area will remain fenced to prevent trespassing. The surface sediments in two channels of the marsh, known as southwest and southeast transects 1 and 6, will be excavated and marsh species will be allowed to recolonize naturally.

Verbal and written comments received on the draft RAP will be responded to by DTSC in the Responsiveness Summary. Comments during the meeting were generally related to concern about hazards to users of the nearby Point Isabel area. This included concerns about children or dogs attaining access to the former Liquid Gold operations area, or people fishing in the nearby sloughs. Written comments received to date have generally been minor and find the proposed remedial action satisfactory.

The first quarter groundwater monitoring report was submitted March 24, 1993. Groundwater table elevations varied this quarter; in most wells it rose approximately .5 feet to 2 feet, except in upgradient Well 11, in which it decreased approximately 3 feet. This variation in the water table in the shallow onsite aquifer is not unusual, given the variability in the fill material.

Analytical data indicated metals at similar concentrations as previous quarters, except for zinc which was detected in two deep wells (from n/d to 5.2 and .0085 mg/l), and in onsite shallow well MW-4R at .067 mg/l. C-9 to C-30 hydrocarbons continue to be detected in a number of wells, but TPH-g and -d are not detected. Oil and grease has been sporadically detected in a number of the wells. To confirm the presence of oil and grease from natural organic material, two well in question, MW-17 and -18 R were analyzed by three different methods (gravimetric, IR, and TPH-IR). Results indicated low (with gravimetric and IR) to non-detect (with TPH-IR).

PROJECTED ACTIVITIES FOR NEXT SIX MONTHS: DTSC plans to approve the Remedial Action Plan by April 30, 1993. USEPA will

prepare the Record of Decision for the Liquid Gold site.

Specific design plans for remedial actions will be submitted later this summer, but because of seasonal considerations and marsh species' life cycles, activity on the site will not begin until spring of 1994.

EPA LEAD SUPERFUND SITES:

JASCO, MOUNTAIN VIEW

EPA approved Jasco's RI/FS and treatability study in May 1992 and issued a proposed cleanup plan in early June 1992. The plan calls for expanded groundwater extraction, treatment prior to POTW discharger, deed restriction prohibiting wells in shallow groundwater, and ex-situ bioremediation of soils. EPA issued the ROD for this site in September 1992, making essentially no changes in the proposed cleanup plan. EPA issued an administrative order for Remedial Design/Remedial Action in early December.

During the last quarter, cleanup activities continued at this site, including interim groundwater extraction with POTW discharge. In January, Regional Board staff rescinded a 1987 enforcement order now moot as a result of EPA's administrative order. Jasco submitted a final RD workplan in late March. The workplan reflects the fact that Jasco's site will probably be redeveloped for residential use within the next several years.

During the next six months, Jasco will continue RD/RA tasks. EPA staff anticipate approving the RD workplan in April, with design completed in late summer.

LORENTZ BARREL AND DRUM, SAN JOSE

ACTIVITIES: JANUARY THROUGH MARCH 1993: The discharger submitted NPDES compliance monitoring and shallow groundwater monitoring reports during December. The site was in compliance with NPDES requirements except for selenium and fish toxicity. Selenium naturally occurs in the soils in the region and may be a background concentration in the groundwater at this site. 100% of the fathead minnows survived the fish bioassay, but the rainbow trout all died. Subsequent tests to determine if the elevated alkalinity and hardness of the water caused the high fish mortality showed that this was not the cause. Additional investigation in this matter is being conducted.

REGULATORY EVENTS: JANUARY THROUGH MARCH 1993 -- None

PROJECTED EVENTS: MARCH THROUGH JUNE 1993 Quarterly NPDES and groundwater monitoring reports will be submitted throughout the next year.

UNRESOLVED ISSUES: The need for additional investigation or removal of onsite sumps and other possible areas of contaminated soils is still under consideration. The cause of failure of the fish bioassay is still unknown and is being investigated.

MIDDLEFIELD-ELLIS-WHISMAN SITES, MOUNTAIN VIEW

EPA adopted a cleanup plan for the MEW area in June 1989. In mid-1991, EPA and two of the companies - Intel and Raytheon - signed a consent decree covering implementation of final cleanup activities; it received court approval in April 1992. EPA issued a unilateral enforcement order to Fairchild and several minor dischargers in November 1990. Fairchild challenged EPA's ROD revision (which changed cleanup goals to standards) and other aspects of the negotiation process. A federal court dismissed the challenge, but Fairchild is appealing the decision. Various responsible parties at the site are submitting RD/RA reports in response to the unilateral order or the consent decree. Design work for the remedial measures is in progress.

During the last quarter, interim remediation continued at several MEW on-site areas. The companies' continued coordination efforts with the Navy over investigation and cleanup activities at Moffett Field, which affects off-site cleanup

efforts by the MEW companies. Most of the companies submitted preliminary designs for on-site cleanup. In March, the companies submitted a regional plume definition report and a preliminary design for a regional remediation system. Fairchild's appeal was dismissed by a federal judge in early 1993.

During the next six months, the companies will continue RD/RA tasks, including submittal of preliminary and final design reports for individual site remediation. EPA staff expect to approve preliminary design for the regional system, with final design to follow 90 days later. Design of a reuse project will happen after individual and regional system designs are completed (i.e. once extracted groundwater points and volumes are known).

NAVAL AIR STATION, MOFFETT FIELD (DOD FACILITY / EPA LEAD)

As of March 1, 1992, oversight responsibility for this site was transferred to another Regional Board division, which will be reporting through the Department of Defense federal facilities agreement (FFA).

UNITED HECKATHORN, (aka: LEVIN METALS), RICHMOND

CURRENT STATUS: The long-awaited results of the benthic studies originally performed by USEPA's Newport, Oregon research lab in Fall of 1991 have not yet been submitted. This report will recommend cleanup levels for sediments at the site based on the ecological assessment.

ICF has prepared for USEPA a conceptual model for completing the risk assessment for the site, dated March 17, 1993.

In early April 1993, the remaining stockpiled DDT-contaminated soils were removed from the site and hauled to a Class I Hazardous Waste facility. Approximately 1700 tons of contaminated soils were removed. EPA has been holding ongoing community meetings when activities occur at the site.

PROJECTED ACTIVITIES FOR SIX MONTHS: Field work for the Marine RI/FS; completed report is expected in fall 1993.

WESTINGHOUSE, SUNNYVALE

The Record of Decision for this EPA lead site was signed on October 16, 1991. EPA reached agreement with Westinghouse to start remedial design in February 1992.

EPA and Westinghouse have failed to reach agreement for a Consent Decree for final remedial action. Instead, EPA will issue a unilateral order that compels Westinghouse to perform the full-scale cleanup plan currently in design. Based on the final remedial design workplan, design continued this quarter and remained on schedule, to be completed in early 1994.

The pilot groundwater treatment and extraction system started operation December 30, 1992. Start-up and shakedown activities continued during the first quarter 1993. Initial system discharge is to the City of Sunnyvale's sanitary sewer.

FUTURE ACTIVITIES: Full operation of the pilot extraction system is expected during the second quarter 1993. Final remedial design will continue during the quarter.

continued....next page

STATUS OF REGIONAL BOARD MSCA SUPPORT CONTRACTS

DATA VALIDATION (INTERAGENCY AGREEMENT W/CSDHS)

The data validation agreement calls for the California Department of Health Services (DHS) to conduct data validation on analytical data from selected ground water samples for eighteen Superfund sites. To date, DHS has reviewed 36 data validation packages from MSCA sites (most sites have undergone at least two rounds of data validation).

As the data validation agreement expired at the end of the first quarter 1992, Board staff, over the coming six months, will consider the need to extend the agreement.

BASELINE PUBLIC HEALTH EVALUATION CONTRACT (W/ICF CLEMENT)

The BPHE contract with ICF Clement expired in March 1993 and the Board can not renew it. It is not expected that the Board will seek another BPHE contract in this Phase.

TECHNICAL ASSISTANCE CONTRACT

The Regional Board is reconsidering whether to contract for technical assistance for the remainder of the MSCA due to the significant State overhead necessary to implement a contract, the value of the assistance gained, and the availability of qualified staff.

SUPERFUND LABORATORY CONTRACT

Pacific Environmental Laboratories (PEL) was the winning bidder for a Superfund Lab contract that runs from January 1, 1992 to June 30, 1993. The contract budget of $65,000 allows Board staff to submit split samples of ground water and soils to PEL as a check on PRP generated data.

Costs

Work on this MSCA task is budgeted by MSCA site. See the Table on page III-6 for overall grant budget status that includes Site Oversight.